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Joyce

NPIC/TSSG/DED-1627-69
26 May 1969

MEMORANDUM FOR THE RECORD

SUBJECT: Comments on Reference Memorandum on Advanced Automated Graphics Effort

REFERENCE: IEG-131-69, Dated 24 April 1969

25X1 1. The above referenced memorandum concerning our contract with [] has been received and noted. It is most encouraging to hear that IEG shares our feelings that NPIC should become more involved in the area of computer graphics. We have been trying to convince NPIC of the growing importance of this field but, we failed to do so for nearly three years until the subject contract was approved. Even this contract represents only a small step in the right direction.

25X1 2. In reference to the comment in the referenced document that our contract is putting the cart before the horse, we proposed in January 1967 that a reporting techniques and equipment study be contracted. In other words, we attempted the systems analysis approach which is mentioned in Paragraph 5 of the memorandum. However, as will undoubtedly be recalled, this effort was not supported in memorandum NPIC/IPD-35/67. The belief of some was that the [] study would adequately handle most of the areas contemplated under the contract proposed by us. Our staff did not fully concur in this opinion and, unable to obtain sufficient backing for a contract, decided to embark on an in-house study of this important area. Unfortunately, our staff was unable to devote the manpower deserving of this project nor were we blessed with all of the talents which a suitable, large contractor might have. Nevertheless, we did our best within these limitations and feel that significant progress has been made. For example, the Photon 713 was chosen for future typesetting output contrary to an alternative recommendation by []. The decision to use the Photon was, of course, not prompted solely by the in-house Reporting Techniques and Equipment Study but was a joint effort by TSSG, Reprographics Division (the PSD) and AID (then IPD).

25X1 3. Numerous Government and industrial locations were visited to determine the state of development of graphics equipment. Based on these visits and on reviewed literature, a compendium of CRT displays was prepared for both textual and graphics consoles. A copy of this compendium is attached to this memo.

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4. Several months ago, TBSG/DED proposed a contract to develop a versatile graphics system capable of producing perspectives or rectified drawings from photographs or line drawings. Every effort was made to make this a practical device that could utilize photo enlargements, film, chips, or opaque drawings as inputs. However, this approach was not supported by PSG or IEG on the basis that present graphics production was not a serious problem.

5. Considerable time was spent in collecting data on past graphics production. Data for CY-67 showed a large amount of manpower devoted to perspectives and rectified line drawings. The argument of PSG is that fewer graphics of this type are presently being made and thus there is little need for automation in this area. Our argument is that one of NPIC's most important functions is communication and graphics are extremely valuable in carrying out this function. In our judgement, it does little good to spend the effort in acquisition and interpretation if the information is lost in transferring it to the analysts and decision makers. The image created in one's mind by the written word too often does not convey what the author intended. A rectified drawing or a perspective leaves little leeway for misinterpretation. A supporting argument was that automation would make the production of perspectives and line drawings less expensive. The number and type of graphics produced does change however, and our staff as well as others we have consulted cannot predict their future magnitude or format. Under these circumstances it is difficult to satisfy all NPIC components. The referenced memo suggests we spend more effort on editing techniques. PSG has recommended dropping the editing tasks and concentrating more on graphics. Accordingly, we are attempting to find a system that can accomplish both textual and graphics display. Frankly, we do not have sufficient experience with the system to be aware of all of its capabilities. This is one of the purposes of the contract. The contract is very exploratory in nature and it makes no guarantee to solve any existing problems. What it will furnish is an information base which can be used to address more pragmatic problems. It proposes to cursorily examine a wide variety of tasks so that we may assess the full potential of the ☐ Graphics Terminal.

6. It is difficult to calculate the cost effectiveness of such systems. We can estimate their cost, but their effectiveness in dollars is quite subjective.

7. We quite agree with IEG that ☐ has a vested interest in the outcome of this project. This interest will be an incentive for them to show us the full capabilities of their graphics system. The monetary size of this contract is not inducive to most companies unless they have other

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interests in the contract. We estimate that this work contracted to any other company would cost considerably more. We plan to utilize NSA's [] Graphics Terminal for the demonstration. The accessibility to this Government owned equipment allows us to perform this contract without purchasing any equipment. Further, the nearness of NSA will be a convenience in allowing numerous NPIC personnel to view the demonstration and will save considerable travel funds.

8. Our Division will seriously consider contract with [] or other well known persons in the text editing field if IEG will support the effort. Please feel free to discuss this item with me in more detail. Other comments from the referenced memo have been forwarded to the appropriate personnel and will be useful in the monitoring of the contract.

9. It is apparent that even though coordination meetings were held there has been a communications breakdown since the DED rationale for this effort was not understood by IEG personnel. Every attempt will be made to circumvent this situation in the future.

[]
Chief, Development & Engineering Division, TSSG

Attachments: (2)

1. Referenced Memorandum
2. Compendium of Displays

Distribution:

Original - Addressee (DED Rt. and File)

- 1 - NPIC/IEG
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NPIC/TSSG/DED/[] (2 Jun 69)

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